

Plug-in Signal Conditioners M-UNIT

PT TRANSMITTER

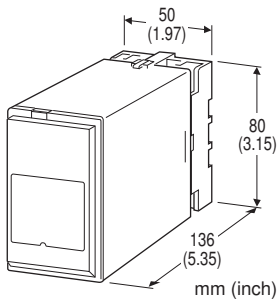
(true RMS sensing; high speed response; peak hold)

Functions & Features

- Converts an alternating voltage from a voltage transformer into a standard process signal
- Dual output: The second output can be switched to 'peak hold' mode with the front DIP switch
- Resetting the peak hold output with the front reset control button
- True RMS sensing with fast 50-millisecond response time (0 - 90 %) is possible
- Isolation up to 2000 V AC

Typical Applications

- Monitoring impulsive power line voltage change



MODEL: PTPH-[1][2][3]-[4]

ORDERING INFORMATION

- Code number: PTPH-[1][2][3]-[4]
Specify a code from below for each [1] through [4].
- Code number (e.g. PTPH-5AA-M2)

[1] INPUT

Voltage

- 1: 0 - 110 V AC
- 2: 0 - 220 V AC
- 5: 0 - 150 V AC
- 6: 0 - 300 V AC
- 8: 0 - 259 V AC

[2] OUTPUT 1

Current

- A: 4 - 20 mA DC (Load resistance 500 Ω max.)
- G: 0 - 1 mA DC (Load resistance 10 kΩ max.)

Voltage

- 4: 0 - 10 V DC (Load resistance 10 kΩ min.)
- 5: 0 - 5 V DC (Load resistance 5000 Ω min.)

6: 1 - 5 V DC (Load resistance 5000 Ω min.)

[3] OUTPUT 2 (momentary value or peak hold)

Current

- A: 4 - 20 mA DC (Load resistance 350 Ω max.)
- G: 0 - 1 mA DC (Load resistance 7000 Ω max.)

Voltage

Same range availability as Output 1

[4] POWER INPUT

AC Power

M2: 100 - 240 V AC (Operational voltage range 85 - 264 V, 47 - 66 Hz)

DC Power

- R: 24 V DC (Operational voltage range 24 V ±10 %, ripple 10 %p-p max.)
- P: 110 V DC (Operational voltage range 85 - 150 V, ripple 10 %p-p max.)

GENERAL SPECIFICATIONS

Construction: Plug-in

Connection: M3.5 screw terminals

Housing material: Flame-resistant resin (black)

Isolation: Input to output 1 to output 2 to contact input to power

Input waveform: Up to 20 % of 3rd harmonic content

Overrange output: 0 to 120 % at 1 - 5 V

Zero adjustment: -5 to +5 % (front)

Span adjustment: 95 to 105 % (front)

Indicator LED: Red light blinks in 800 millisecond intervals when the power is supplied; blinks in 200 millisecond intervals when the peak hold output is reset.

Function setting: DIP switch

- Output 2 Function (Momentary value output/Peak hold value output)
- Line Frequency
- Response Time

Reset control: Used to reset the peak hold output.

Momentary value is output immediately after the resetting.

INPUT SPECIFICATIONS

■ VOLTAGE INPUT

Frequency: 50 or 60 Hz

Input burden: ≤ 0.5 VA

Overload capacity: 200 % of rating for 1 minute, 120 % continuous

Operational range: 0 - 120 % of rating

■ Contact Input: Used to reset the peak hold output. Momentary value is output immediately after the resetting.

Detecting voltage/current: 15 V DC / approx. 2.5 mA

Detection levels: $\leq 5 \text{ k}\Omega$, $\leq 6 \text{ V}$ for ON;
 $\geq 100 \text{ k}\Omega$, $\geq 14 \text{ V}$ for OFF

INSTALLATION

Power Consumption

•AC:

Approx. 5 VA at 100 V

Approx. 6 VA at 200 V

Approx. 7 VA at 240 V

•DC: Approx. 3 W

Operating temperature: -5 to +60°C (23 to 140°F)

Operating humidity: 30 to 90 %RH (non-condensing)

Mounting: Surface or DIN rail

Weight: 210 g (0.46 lbs)

PERFORMANCE in percentage of span

Accuracy: $\pm 0.5 \%$

Temp. coefficient: $\pm 0.03 \%/^{\circ}\text{C}$ ($\pm 0.02 \%/^{\circ}\text{F}$)

Response time: $\leq 50/100/200/500 \text{ msec.}$ (0 - 90 %)

Peak hold reset time: 20 msec.

Ripple: 0.5 %p-p max.

Line voltage effect: $\pm 0.1 \%$ over voltage range

Insulation resistance: $\geq 100 \text{ M}\Omega$ with 500 V DC

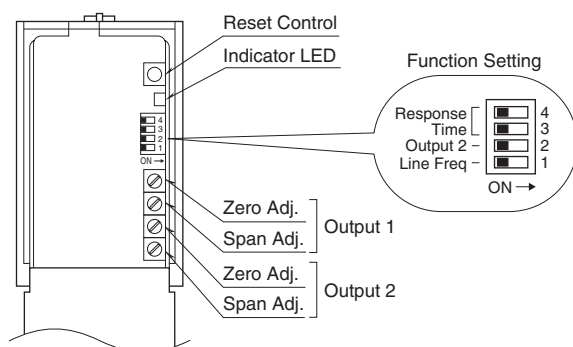
Dielectric strength: 2000 V AC @ 1 minute

(input to output 1 or output 2 or contact input to power to ground)

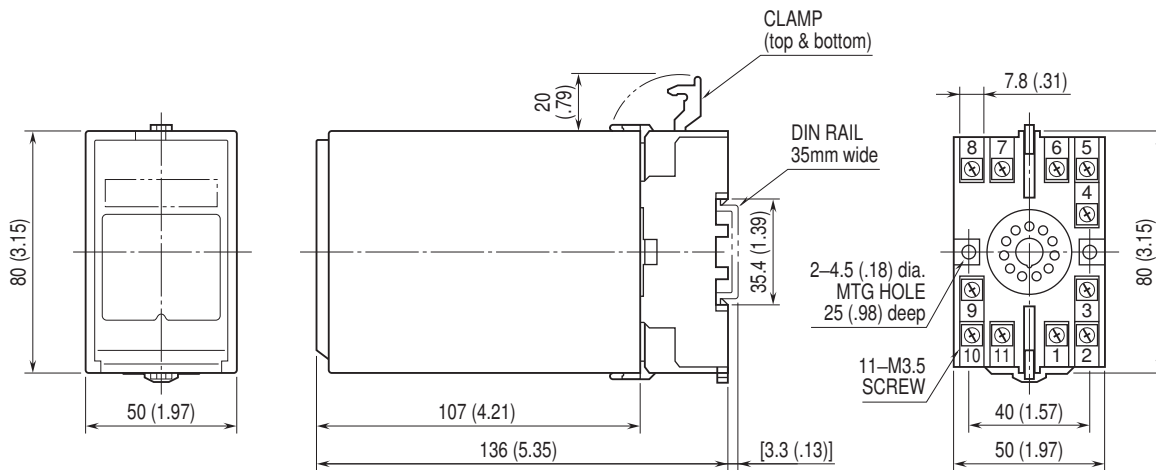
500 V AC @ 1 minute (output 1 to output 2 to contact input)

Impulse withstand voltage: 1.2/50 $\mu\text{sec.}$, $\pm 5 \text{ kV}$ (input to output 1 or output 2 or contact input or ground)

EXTERNAL VIEW

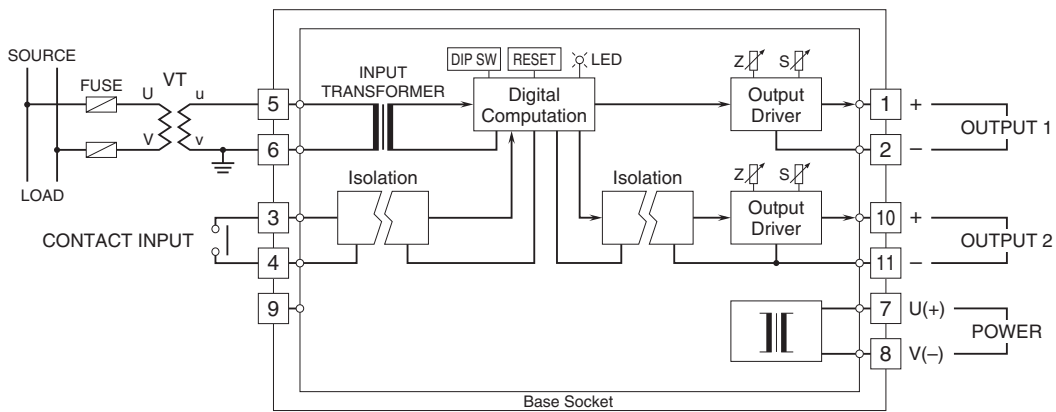


DIMENSIONS unit: mm (inch)



• When mounting, no extra space is needed between units.

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications are subject to change without notice.